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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/282,679 03/31/99 FALO

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EXAMINER

VANDER VEGT, F

ART UNIT

PAPER NUMBER

1644

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DATE MAILED:

01/21/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/282,679

Applicant(s)
Falo et al

Examiner
F. Pierre VanderVegt

Group Art Unit
1644



☒ Responsive to communication(s) filed on Oct 27, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), ~~or thirty days, whichever is longer~~, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-36 ~~is/are~~ pending in the application.

Of the above, claim(s) 14-36 ~~is/are~~ withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-13 ~~is/are~~ rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4 1/2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

This application is a continuation-in-part of application S.N. 09/030,985, which claims priority to provisional application 60/039,472.

Claims 1-36 are currently pending in this application.

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Election/Restriction

1. Applicant's election with traverse of Group I, claims 1-13, in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the T cells of group II should be considered with the generation method of Group I. This is not found persuasive because the cells can be
10 obtained by methods without regard to the method of Group I.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 14-36 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to non-elected inventions, the requirement having been traversed in
15 Paper No. 6.

Claims 1-13 are the subject of examination in the present Office Action.

Specification

3. The disclosure is objected to because of the following informalities:

20 The use of trademarks has been noted in this application. For example, the trademark FACSTAR PLUS (line 9) appears on page 12 of the instant specification. Trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. Applicant should scan the remainder of the specification for additional occurrences of trademarks.

25 Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Each letter of the trademark should be capitalized. See MPEP 608-01(V) and Appendix I. Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

5 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was
15 made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guo et al (a on form PTO-1449) in view of Ellis et al (U on form PTO-892) as evidenced by Unanue (V on
20 form PTO-892) and Dezutter-Dambuyant (W on form PTO-892).

The Guo et al reference teaches murine cell hybrids between activated B cells and tumor cells. Guo et al further teaches that B cells are highly effective antigen presenting cells (APCs). Guo et al also teaches that these APC/tumor cell hybrids are capable of activating immune cells against the parental tumor line both *in vitro* and *in vivo* (Abstract in particular). While Guo et al
25 does not teach autologous, the reference does teach the cells as being syngeneic, meaning they are derived from within an inbred population which is genetically identical, and therefore equivalent to autologous. Guo et al does not teach the use of dendritic cells as the APCs to be used as the fusion partner. Ellis et al teaches that dendritic cells are the most effective APCs for inducing T cell proliferation (Abstract in particular) and teaches the isolation of dendritic cells by previous
30 methods (page 2804, section 2.2 in particular). Ellis et al also teaches a comparison of the different types of APCs' ability to stimulate cytokine production in mixed lymphocyte reactions

(Figures 2-5 in particular). It would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to substitute the dendritic cells taught by Ellis et al for the B cells of Guo et al as the APC fusion partner in producing a dendritic-like cell/ tumor cell hybrid. One would have been motivated with a reasonable expectation of success based upon the teachings of Guo et al that APCs can effectively present antigens of tumor cells with which they are fused and the teachings of Ellis et al that dendritic cells are the most effective type of APC for stimulating T cell response. The different sources of dendritic cells recited in claim 2 are all included because they are all of the same lineage, regardless of where in the body they are derived from, because Unanue provides evidence that splenic dendritic cells are the same as those found in lymph nodes and as the Langerhans cells of the skin (page 102, subsection "General Characteristics" in particular) and Dezutter-Dambuyant evidences that these are also the same as the dermal dendritic cells and which arise from bone marrow precursors (Abstract in particular). The tumor cells recited in claim 4 are all included because one skilled in the art would have an equal expectation of success with any other type of tumor cell as that experienced by Guo et al with hepatocarcinoma cells.

Conclusion

6. Papers related to this application may be submitted to Technology Center 1600, Group 1640 by facsimile transmission. Papers should be faxed to Group 1640 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The fax phone number for official documents to be entered into the record for Art Unit 1644 is (703)305-3014.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to F. Pierre VanderVegt, whose telephone number is (703)305-6997. The Examiner can normally be reached Tuesday through Friday and odd-numbered Mondays (on year 2000 366-day calender) from 6:30 am to 4:00 pm ET. A message may be left on the Examiner's voice mail service. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ms. Christina Chan can be reached at (703)308-3973. Any inquiry of a

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Art Unit: 1644

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general nature or relating to the status of this application should be directed to the Technology Center 1600 receptionist, whose telephone number is (703)308-0196.

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F. Pierre VanderVegt, Ph.D.
Patent Examiner
Technology Center 1600
10 January 18, 2000